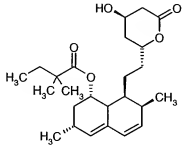
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

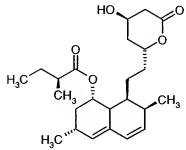
1. (Currently Amended) A process for the preparation of simvastatin of formula I:



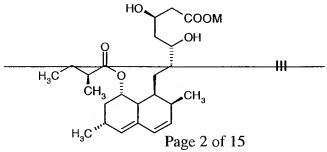
----- I

which comprises the steps of:

a) reacting compound of formula II (lovastatin) ~~or formula III~~:



----- II



III

~~wherein M is H, metal ion or NH_4,~~

with the compound of formula IV:

HNR_1R_2 ---------- IV

wherein

R_1 is $-R_5-X-R_6$ wherein

R_5 is alkyl, arylalkyl or cycloalkyl,

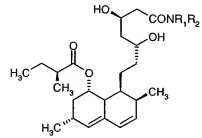
X is O or S and

R_6 is alkyl, arylalkyl, cycloalkyl or aryl; and

R_2 is ~~independently selected from~~ H ~~, alkyl, cycloalkyl, arylalkyl and a group as defined for R_1;~~

~~or R1 and R2 may be bonded to form a cyclic ether or cyclic thio ether;~~

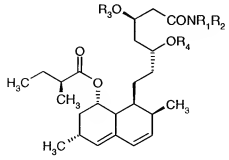
to produce a compound of formula V:



------ V

wherein R_1 and R2 are as defined above,

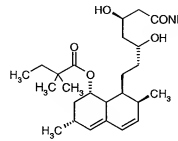
(b) optionally protecting the two hydroxyl groups of the compound of the formula V to produce a compound of the formula VI:



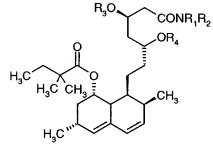
------ VI

wherein R3 and R4 represents suitable protecting groups,

(c) methylating said compound of formula V or VI to give a compound of formula VIIa or VIIb:



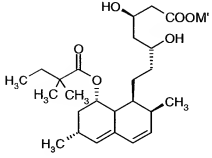
----- VIIa



----- VIIb

wherein R_1, R_2, R_3 and R_4 are as defined above,

(d) hydrolyzing the amide group if the product of the above step is said compound of formula VIIa or deprotecting the two protected hydroxy groups prior to hydrolysis if the product of the above step is said compound of formula VIIb, optionally treating the hydrolyzed product with aqueous ammonia, to produce a compound of formula VIII:



----- VIII

wherein M' is a metal such as sodium or potassium or NH_4, and

(e) lactonizing said compound of the formula VIII to produce simvastatin of formula I.

2. (original) A process according to claim 1, wherein the hydroxy groups are not protected before methylation.

3. (Currently Amended) A process according to claim 1 ~~2~~, wherein R_1 is selected from methoxyethyl, ethoxyethyl and methoxymethyl, and R_2 is ~~selected from H, methoxyethyl, ethoxyethyl and methoxymethyl~~.

Claims 4 - 28 (Canceled)

29. (Currently Amended) A process according to claim 2, wherein R_1 is selected from methoxyethyl, ethoxyethyl and methoxymethyl, and R_2 is ~~selected from~~ H ~~, methoxyethyl, ethoxyethyl and methoxymethy~~.

30. (Canceled)

31. (Canceled)

32. (Previously Presented) A process according to claim 1, wherein R_1 is methoxyethyl and R_2 is H.

33. (Previously Presented) A process according to claim 2, wherein R_1 is methoxyethyl and R_2 is H.

34. (Previously Presented) A process according to claim 3, wherein R_1 is methoxyethyl and R_2 is H.

35. (Previously Presented) A process according to claim 29, wherein R_1 is methoxyethyl and R_2 is H.

36. (Canceled)

37. (Canceled)

38. (Previously Presented) A process according to claim 1, wherein methylation is carried out using an alkali metal amide and a methyl halide.

39. (Previously Presented) A process according to claim 38, wherein the alkali metal is lithium, sodium or potassium; and the methyl halide is methyl iodide, methyl chloride or methyl bromide.

40. (Previously Presented) A process according to claim 38, wherein the alkali metal amide is lithium pyrrolidide and the methylhalide is methyl iodide.

41. (Previously Presented) A process according to claim 39, wherein the alkali metal amide is lithium pyrrolidide and the methylhalide is methyl iodide.

42. (Previously Presented) A process according to claim 1, wherein the starting compound is lovastatin of the formula II.

43. (Previously Presented) A process according to claim 1, wherein R_3 and R_4 represent silyl protecting groups.

44. (Previously Presented) A process according to claim 43, wherein the silyl protecting groups are selected from t-butyldimethylsilyl and trimethylsilyl groups.

45. (Previously Presented) A process according to claim 1, wherein:

i) lovastatin is treated with methoxyethyl amine in an organic solvent to produce the compound of the formula V wherein R_1 is methoxyethyl- and R_2 is H,

ii) methylating the product obtained in the previous step with lithium pyrrolidide in tetrahydrofuran and methyl iodide to produce the compound of the formula VIIa wherein R_1 is methoxyethyl- and R_2 is H,

iii) hydrolyzing the product obtained in the previous step with a strong base to obtain the compound of the formula VIII,

iv) adding aqueous ammonia to the product obtained in the previous step to produce simvastatin ammonium salt, and

v) lactonizing the product obtained in the previous step to produce simvastatin.

46. (Canceled)

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Canceled)

55. (Canceled)

56. (Canceled)

57. (Canceled)

58. (Canceled)

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Canceled)

64. (Canceled)

65. (Canceled)